



Request for Sites to Host Demonstrations/ Evaluations of Innovative Technologies for Hazardous Waste Cleanup

Issue Date: October 29, 2004

Due Date: March 30, 2005

The following is a solicitation issued by the Superfund Innovative Technology Evaluation (SITE) program. The objective of this solicitation is to identify hazardous waste sites that are available to host and are in need of full scale demonstrations of innovative treatment technologies. This solicitation should be of interest to private firms, or state and federal government agencies that have financial or regulatory responsibility for on-site hazardous waste remediation.

1. Introduction.

The U.S. Environmental Protection Agency established the SITE Program to help promote the use of innovative remediation and field measurement technologies at hazardous waste sites. SITE offers a mechanism where the performance and the costs of innovative technologies can be demonstrated and evaluated by an independent third party at a particular hazardous waste site. These demonstration projects allow participation of private entities, state environmental agencies and other federal agencies such as the Department of Energy (DOE) and the Department of Defense (DoD). The SITE program is responsible for preliminary treatability studies, test plan preparation, sampling, sample and data analysis, and for the reporting of the demonstration results. **The program does not give financial support to sites or technology vendors.**

The strategy of the SITE program is to conduct thorough on-site evaluations of innovative technologies which show promise in providing more effective remediation of the subject site. It is envisioned that the result of a SITE demonstration will be three fold: 1) the site owner or other decision maker will be able to make a more informed choice on the clean up technology to use for larger scale work, 2) technology vendors and/or developers will have gained credible data and much needed exposure for their process and 3) the environmental community at large will gain a better understanding of the capabilities and costs of new and promising technologies.

This solicitation is directed toward those that have the challenge and responsibility for site clean up: site owners, EPA Remedial Project Managers (RPMs) or On Scene Coordinators (OSCs), site managers from state agencies, or other site representatives. It is not directed primarily toward the technology vendor. However, it is anticipated that other

solicitations will go out which are more focused on finding appropriate technologies for specific sites that have been selected through this solicitation.

2. The Application Process

The applications will be evaluated by a review board consisting of representatives from EPA and other state and Federal agencies.

The attached form can also be downloaded from the SITE program web site (<http://www.epa.gov/ORD/SITE>), or it can simply be retyped.

The completed form can be mailed to the following address:

Mr. Randy A. Parker
U.S. Environmental Protection Agency (MS 481)
26 West Martin Luther King Drive
Cincinnati, OH 45268

Alternatively applications can be E-mailed to parker.randy@epa.gov

Questions regarding this solicitation should be directed to

Randy A. Parker (513) 569-7271

3. Selection of Technologies to be Demonstrated.

Applicants may apply to the program with or without a specific technology in mind for demonstration. If a technology is specified in the application, applicants should be able to defend their selection of the technology. If no technology is specified, and the application is accepted, then the SITE program will work with the applicant in determining the most suitable technologies to be demonstrated at the site. On occasion, additional solicitations will be issued that seek technologies that would be appropriate for the sites that have been selected.

Traditionally, SITE conducts evaluations of full-scale or large pilot-scale demonstrations and does not evaluate technologies that are of a smaller scale. This approach allows for realistic cost and performance data to be collected that would be helpful to those making decisions for selecting full scale remediation systems.

Experience has shown that a treatability study is often necessary prior to the actual technology demonstration. SITE will work with Program participants in conducting treatability studies. If a treatability study is deemed necessary, SITE will be responsible for the experimental and sampling designs, and implementation of those designs. No funds will be exchanged between the EPA and the site representative or technology vendor, but the SITE program will prepare the treatability study plan and provide for the personnel, facilities, and other resources for the associated sampling and

analysis.

4. Responsibilities of Participants.

Aside from providing input into the planning and implementing of the demonstration project, project participants also have specific responsibilities which are summarized below. A much more detailed description of responsibilities can be found at <http://www.epa.gov/ORD/SITE>.

Site Owner/Representative. Responsible for ensuring logistical support to prepare the site for demonstration. Examples, not inclusive, are as follows: utilities, excavation, disposal of wastes generated during the technology demonstration, paving for access to the demonstration location, and site security. Experience has also shown that technology vendors often need assistance from the site representatives in paying for the expenses incurred before, during or after the demonstration. **SITE does not provide funding to technology vendors for demonstrations.**

US EPA SITE Program. Responsible for the test plan preparation, analytical costs associated with treatability studies, sampling and analysis during the demonstration, and the writing, publishing and dissemination of the evaluation report.

Technology vendor or developer. Technology vendors are responsible for mobilizing equipment and personnel to the site to perform the technology demonstration. Financial support to vendors for demonstration of their technology is provided through contractual arrangement with the site owners/representatives.

5. Sites and Contaminants of Interest.

The SITE Program has particular interest in evaluating in-situ and lower cost technologies. The Program is interested in receiving proposal in the following priority areas only:

Priority Areas

Sites	Superfund Sites with contaminated Sediments* Site with soil /groundwater contamination as listed below:
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Soil/Groundwater contaminated with any or all of the following:

- DNAPL
 - Chlorinated solvents
 - PCBs
 - Arsenic, mercury or other heavy metals
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* Sediments (**In situ, ex situ, or in confined disposal facilities (CDFs)**) contaminated with any or all of the following:

- Pesticides
 - PCBs
 - PAHs
 - Arsenic, mercury or other heavy metals
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Technologies such as data management systems, thermal destruction systems, and solidification are of lower priority to the program. Sites contaminated primarily with petroleum related compounds are also of low interest.

6. Technology areas of Interest

The objective of the SITE Program is to support research and development projects to meet high-priority, Superfund related environmental needs. In addition to the priority areas listed above, The SITE Program seeks sites with an interest in evaluation of technologies in the following areas:

Biotreatment/biochemical treatment
Chemical treatment
Phytoremediation
Materials handling
In-situ groundwater treatment
Mining waste treatment
Multi process treatment systems (treatment trains)
Brownsfields treatment
In-situ sediment treatment and/or containment
Ex-situ treatment of excavated contaminated sediment
Mercury treatment
Extraction/separation technologies

All applicants will be notified regarding the results of the review process by May 20, 2005.

Application Form for SITE Demonstrations

Although all questions are important and should be concisely addressed, experience has shown that accurate information in the areas of site characterization and site logistics are critical to the reviewers understanding the problems and challenges at the site. If the site is not well characterized it will likely score very low. **Applications must be limited to 10 pages in length**

Applicant name:

Applicant address:

Phone and fax numbers:

Email:

Site name and location:

1) Anticipated benefits.

Please describe objectives of the potential site demonstration and how the applicant hopes to benefit from a technology evaluation conducted by the SITE program and why the site would be a good candidate for such an evaluation.

2) Site Background.

Describe history of the site including location, summary of ownership, how contamination occurred and remediation to date.

3) Site Characterization

Describe the site in terms of contaminant and hydrogeologic characterization. Give a concise summary of the results from site characterization work including: concentrations of contaminants including range and average; vertical and horizontal extent of contamination; brief description of relevant subsurface formations. For sites with impacted groundwater, please indicate whether DNAPL is a concern and if so, the extent of the problem.

4) Site Logistics

Describe logistic features of the site that may affect, either negatively or positively, the progress of a technology evaluation. One feature that has proved to be important is the availability of funding to help pay for vendor's costs. Other important logistical features will include things such as availability of utilities, accessibility, and schedule of site related activities (e.g., site investigations, clean up schedules, pending sales of property.) Please include the project schedule and milestones descriptions for the technology demonstration.

5) Regulatory History of the Site.

Briefly summarize the following: clean up goals; risk assessment findings; remediation plans and deadlines; state/federal regulatory involvement.

6) Technology Description

If the applicant is considering an innovative technology for a SITE demonstration, describe the technology that is being proposed and the technical objective of the demonstration. Include size of technology, summary of relevant performance data, availability of technology, and capabilities and limitations of technologies. If a technology vendor has been chosen, please include a description of related demonstrations and data justifying the expected performance (if applicable). It is also important to discuss briefly the advantages, disadvantages or challenges in implementing the technology. Lastly, please include the amount of treatability study work needed, if any. (Please note that the applicant need not submit a technology for consideration in this application).

7. Stakeholder involvement

Please list the project stakeholders and describe their anticipated role in a SITE Demonstration. Please describe the stakeholder financial or in-kind support expected for the proposed demonstration.